REMARKS

The Office Action dated November 17, 2004 has been received and carefully noted. The following remarks are submitted as a full and complete response thereto. Claims 1-23 are submitted for consideration.

Claims 1-23 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,276,406 to Samay et al. The Office Action alleges that Samay et al. teaches all of the limitations of the claims except for the first circuitry having a length which is substantially less than a quarter wavelength of different frequencies and a length in the range of .10 to .25 degrees of a signal envelop frequency and a length in the range of .15 to .20 degrees of a signal envelope frequency and a length in the range of .17 degrees of a signal envelope frequency. However, the Office Action alleges that it would have been obvious to implement the specific values of the components since they are based on the routine experimentation to obtain the optimum operating parameters. The rejection is traversed as being based on a reference that neither teaches nor suggests the novel combination of features clearly recited in independent claims 1 and 23 and/or the claims dependent thereupon.

Claim 1, upon which claims 2-22 depend, recites a power amplifier including input means for receiving signals at a plurality of different frequencies. The power amplifier also includes a power transistor for amplifying received signals and first circuitry connected at one end to the power transistor and at another end to a relatively low frequency shorting circuitry. The first circuitry being such that the another end is an

open circuit to the different frequencies. The first circuitry has a length which is substantially less than a quarter wavelength of the different frequencies.

Claim 23 recites an integrated circuit including input means for receiving a signals at a plurality of different frequencies and a power transistor for amplifying received signals. The integrated circuit also includes a first circuitry connected at one end to the power amplifier and at another end to a relatively low frequency shorting circuitry. The first circuitry being such that the another end is an open circuit to the different frequencies. The first circuitry having a length which is substantially less than a quarter wavelength of said different frequencies.

As outlined below, Applicant submits that the cited reference of Samay et al. does not teach or suggest the elements of claims 1-23.

Samay et al. teaches an RF input terminal coupled to the gate of transistor Q1 via capacitor C1, C2, C3 and inductors L1 and L3. A connection node "P", at the junction of L1, L3 and C3 also is fed by a voltage divider comprised of resistors R1 and R2 to set the gate to source voltage and thus, the DC operating point of Q1. A feedback network comprised of capacitor C5, resistor Rf and inductor L5 is connected between node "P" and the junction of inductor L4, L6 and L7. Capacitor C5 is a large value DC blocking capacitor. Resistor Rf and inductor L5 serve to adjust the gain and terminal impedance of the amplifier. Inductor L6 and capacitor C6 serve as a low pass output matching circuit. Col. 3, lines 1-34 and Figure 1.

Applicants submit that Samay et al. simply does not teach or suggest the combination of features clearly recited in claims 1 and 23. The Office Action states that the first circuitry of the claimed invention is taught as L7, C7, L5, C5 by figure 1 of Samay et al. However, Figure 1 of Samay et al. shows that the two terminals of L7 cannot be said to be the ends of the "circuitry" including L7, C7, L5 and C5 which are connected together in series. Applicant submits that the first circuitry as recited in claim 1 most closely corresponds to the component of L7 in figure 1 of Samay et al.. As such, Applicant submits that figure 1 of Samay et al. fails to show or suggest a first circuitry connected at one end to the power transistor and at another end to a relatively low frequency shorting circuitry, the first circuitry being such that the another end is an open circuit to the different frequencies, the first circuitry having a length which is substantially less than a quarter wavelength of the different frequencies as recited in claims 1 and 23.

The Office Action admits that Samay et al. fails to disclose the first circuitry having a length which is substantially less than a quarter wavelength of the different frequencies as recited in claims 1 and 23. However, according to the Office Action it would have been obvious to one skilled in the art to have implemented the specific values of the components since they are based on the routine experimentation to obtain the optimum operating parameters. Applicant respectfully but strongly disagrees with this assertion. There is simply no teaching or suggestion in Samay et al. of implementing L7 or indeed all of the components (L7, C7, L5 and C5) in such a way that it has a length

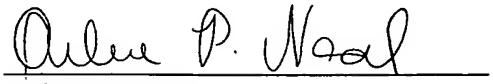
substantially less than a quarter wavelength of the frequencies of signals received at the amplifier. The present invention addresses two issues relevant to power amplifiers. Firstly, the peak powers of fluctuating envelope and secondly, linearity. See at least paragraph 00005 of the present application. Samay et al. does not discuss these issues nor is there any general suggestion in Samay et al. that advantages could be obtained by using an inductor L7 having a very low electrical length. In contrast, such advantages are explained in detail in the present application, for example at page 9, first full paragraph to page 10, first paragraph. Therefore, Applicant respectfully asserts that the rejection under 35 U.S.C. §103(a) should be withdrawn because Samay et al. neither teaches or suggests each feature of claims 1 and 23 and hence, dependent claims 2-22 thereon.

As noted previously, claims 1-23 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 1-23 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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